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Important Notices

As has been announced in several previous issues of our journal, changed postal rules affecting second class mail matter make it impossible for us to include the customary reminders in our January issue, nor can we attach flyers to our journal. We have stated, however, that we shall print a statement in the NOTES & NEWS section when renewal time has arrived.

Therefore we now make the announcement that renewals of memberships are due. The Regular Membership at its meeting on November 10, 1969, decided unanimously to hold dues and subscription rates at their present level in spite of the continued inflationary pressures.

Statements and invoices are now in the mail and may arrive even before the current number. Prompt payment of the dues, to reach the Manager before April 15, 1970, will assist in keeping expenses - and, consequently, the dues - at a minimum. Your cooperation is therefore earnestly solicited.

Jean M. Cate, Manager.

Affiliate Membership for the fiscal year July 1, 1970 to June 30, 1971 has been set at $8.-. Postage for members in Canada, Mexico, Central and South America $1.-, for members in any other foreign country $1.50 additional.

METHODS & TECHNIQUES

A Mechanical Shell Washer

BY

JACQUELIN N. MILLER
Department of Oceanography, University of Hawaii

AND

CARL L. HUBBS
Scripps Institution of Oceanography
University of California, San Diego, California

Molluscan material collected from archeological sites typically requires major cleaning before it can be identified to species or analyzed by weight. Frequently the extraneous coating is particularly tenacious, apparently because the charcoal and soil fuse to the shell during heating in midden fires and/or the encrusting caliche becomes firmly cemented to the shells.

During the course of studies on the molluscan fauna from ancient archeological sites (Miller & Hubbs, MS in preparation) need arose to devise a method more rapid and thorough than the usual hand scrubbing technique for cleaning the rapidly accumulating, voluminous quantities of heavily soiled shells. To meet this need, the mechanical shell washer described below was developed (see Figure 1).

Basically, the device is similar to the standard laboratory rock tumbler or jar mill, with certain modifications to better adapt it to our purposes. The shell containers are polyethylene cylinders 23 × 15 cm with removable internal baffles constructed from $\frac{1}{8}$-inch stock sheets of lucite. The snap-on polyethylene lids are kept secure and watertight by turned aluminum caps connected by screw

[1] Contribution from Scripps Institution of Oceanography, University of California, San Diego, California 92037

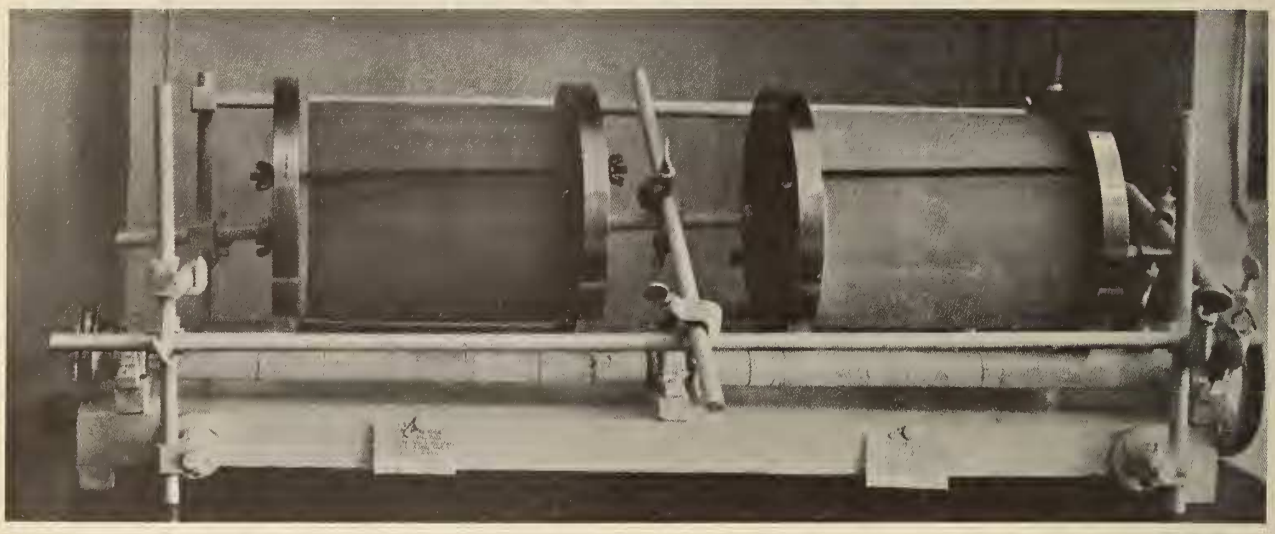

Figure 1

rods and wing nuts. These cylinders, tightly sealed by the caps, ride freely on two sets of rollers driven by a 1/15 hp. electric motor. A simple frame of stainless steel rods and laboratory clamps attached to a heavy wooden base keeps the cylinders centered on the rollers (Figure 2).

To wash a sample, the cylinders are filled approximately $\frac{2}{3}$ full of shell. Hot water and 6 cc of a non-foaming detergent are added to within 3 cm of the top. For shells heavily encrusted with caliche a few drops of hydrochloric acid may be added. The polyethylene lids are then sealed with the aluminum caps and the cylinders are placed on the rollers to wash for 15 to 45 minutes, depending on the size and condition of the sample. When a sufficient time has elapsed, the cylinders are removed and the sample is rinsed into a 4 mm sieve. The soil passing through the sieve is collected in a tray where it is available for further examination. The cleaned shells remaining in the sieve are oven-dried preparatory to sorting for species and analysis by weight.

We feel that this particular machine has several advantages over the commercially available models. Use of polyethylene in place of metal or glass cylinders assures virtually no breakage of even the more fragile species. Fewer problems of leakage are encountered with the free-riding cylinders than with direct-drive cylinders. The polyethylene cylinders are much lighter and more easily handled in loading and unloading than comparable sized metal, porcelain, or glass cylinders, and there is no corrosion problem. The entire assembly, complete with cylinders and labor, may be reproduced for about two-thirds the cost of commercially available tumblers.

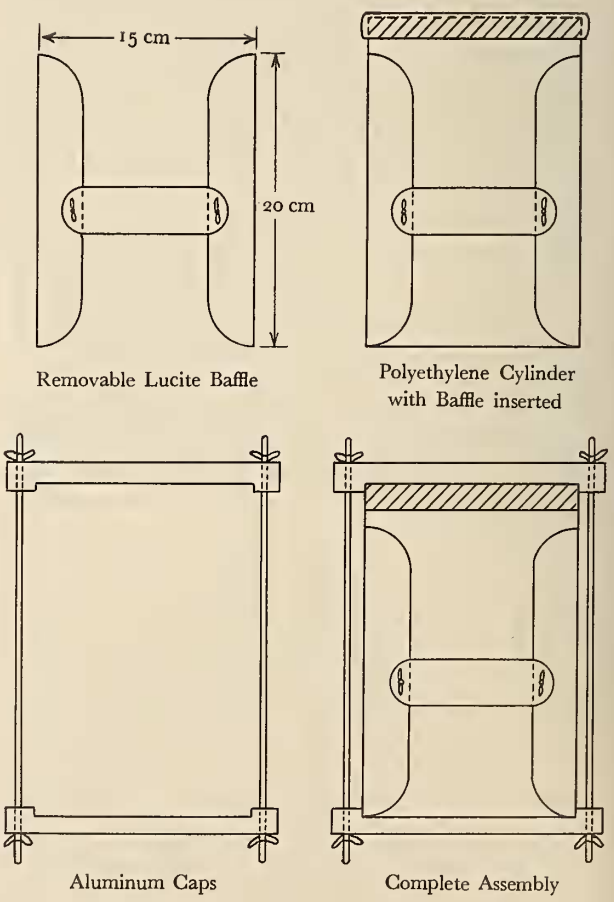

Figure 2